AFNOR NF M 87-202 OS Armoured Fire retardant

- Instrumentation cables 250 V
- Overall Screen (OS)
- **Hydrocarbons resistant**

STANDARDS

Test IEC 60332-3-22 Cat.A

APPLICATIONS

These instrumentation and communication cables are used to **transmit analogue or digital signals in measurement and process control**. They are well adapted to **underground use in industrial applications where hydrocarbons may be present and mechanical protection is needed (refinery areas, chemical plant…)**.

Nexans code

- 1st serie = number of pairs, triples or quads: 01 to 27 - 2nd serie = pair (IP), triple (IT), quad (IQ)
- 3rd serie = conductor 05 (1 x 0.8 mm), 09 (7 x 0.4 mm) or 15 (7 x 0.52 mm)
- 4th serie = overall screen (EG), individual screen + overall screen (EI)
- 5th serie = mechanical protection: without metal tape (SF), with steel tape (FA), with lead and steel tape (PF)

Design

Conductor:
- Solid plain copper 0.50 mm² (1 x 0.80 mm) or stranded plain copper cross-section 0.88 mm² (7 x 0.40 mm) or 1.5 mm² (7 x 0.52 mm)

Insulation:
- Polyvinyl chloride (PVC)

Collective screen:
- Polyester tape
- Tinned copper drain wire
- Aluminium/polyester tape

Inner sheath:
- Polyvinyl chloride (PVC)

Armour:
- Double steel tape

Outer sheath:
- Polyvinyl chloride (PVC)
- Colour: light-blue or grey

Core identification

Pair: natural - red
Triple: natural - red - blue
Quad: natural - red - blue - yellow
Natural cores printed with pair/triple number

Marking

NEXANS 279 - Number of pair/triple/quad IP/IT/IQ 05/09/15 EG FA IEC 60332-3-22(A) + metric marking

Fire retardant	Chemical resistance	Electro magnetic interference resistance	Operating temp.	Max.conductor temp.in service
EN IEC 60332-3-22 (cat A)	**Hydrocarbons resistant**	**Yes**	**-20 ... 60 °C**	**70 °C**

CONTACT

Market information
industryprojects.business@lynxeogroup.com

AFNOR NF M 87-202 OS Armoured Fire retardant

CHARACTERISTICS

Construction characteristics	
Conductor material	Plain copper
Insulation	PVC
Overall screen	Tinned copper drain wire + aluminium/polyester tape
Outer sheath	PVC
Armour type	Steel tapes
Inner sheath	PVC
Dimensional characteristics	
Number of quads	-
Electrical characteristics	
Operating voltage	250 V
Usage characteristics	
Fire retardant	EN IEC 60332-3-22 (cat A)
Chemical resistance	Hydrocarbons resistant
Electro magnetic interference resistance	Yes
Operating temperature, range	-20 ... 60 °C
Max. conductor temperature in service	70 °C
Standard	NFM

SECTION 0.5MM

Reference	Name	Diam. over inner sheath [mm]	Diam. over armour [mm]	Min. outer diam. [mm]	Max. outer diam. [mm]	Approx. weight [kg/km]
	03 IP 05 EG FA	8.5	9.6	11.0	12.5	215
	07 IP 05 EG FA	11	12.1	13.6	15.6	320
	07 IT 05 EG FA	12.6	13.7	15.1	17.3	405
	12 IP 05 EG FA	13.9	15.0	16.5	19.0	445
	12 IT 05 EG FA	15.9	17.0	18.4	21.1	580
	19 IP 05 EG FA	17.4	18.4	19.8	22.7	625
	27 IP 05 EG FA	20.2	21.3	22.7	26.1	810

Fire retardant
EN IEC 60332-3-22 (cat A)

Chemical resistance
Hydrocarbons resistant

Electro magnetic interference resistance
Yes

Operating temp.
-20 ... 60 °C

Max.conductor temp.in service
70 °C

AFNOR NF M 87-202 OS Armoured Fire retardant

SECTION 0.88MM

Reference	Name	Diam. over inner sheath [mm]	Diam. over armour [mm]	Min. outer diam. [mm]	Max. outer diam. [mm]	Approx. weight [kg/km]
	01 IP 09 EG FA	6.6	7.6	9.1	10.3	165
	01 IT 09 EG FA	6.9	8.0	9.4	10.6	181
	01 IQ 09 EG FA	7.5	8.5	10.0	11.3	199
	03 IP 09 EG FA	10.9	12.0	13.3	15.3	305
	07 IP 09 EG FA	14.4	15.4	16.9	19.4	480
	07 IT 09 EG FA	16.8	17.8	19.2	22.0	625
	12 IP 09 EG FA	18.9	19.9	21.4	24.5	730
	12 IT 09 EG FA	21.3	22.3	23.7	27.1	955
	19 IP 09 EG FA	23.2	24.2	25.5	29.2	1010
	27 IP 09 EG FA	27.4	28.4	29.6	34.0	1310

SECTION 1.5MM

Reference	Name	Diam. over inner sheath [mm]	Diam. over armour [mm]	Min. outer diam. [mm]	Max. outer diam. [mm]	Approx. weight [kg/km]
	01 IP 15 EG FA	7.3	8.3	9.8	11.0	190

Fire retardant
EN IEC 60332-3-22 (cat A)

Chemical resistance
Hydrocarbons resistant

Electro magnetic interference resistance
Yes

Operating temp.
-20 ... 60 °C

Max.conductor temp.in service
70 °C

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ELECTRICAL DATA NF M 87202

Electrical data

Section	Maximum Voltage (V)	Voltage Test (V)	DC Lineic resistance at 20°C (Ω/km)	Self Inductance mH/km		Capacitance between cond. (nF/km)
				Non Armoured	Armoured	
05	250	2 000	37.5	0.33	0.38	≤145
09	250	2 000	21.4	0.31	0.36	≤160
15	250	2 000	12.1	0.31	0.36	≤180

SELLING AND DELIVERY INFORMATION

Minimum bending radius:

10 x outer diameter
To be doubled during laying operations

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Hydrocarbons resistant

Electro magnetic interference resistance
Yes

Operating temp.
-20 ... 60 °C

Max.conductor temp.in service
70 °C